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(54) Title: SPERM-SPECIFIC CATION CHANNEL, CATSPER-4, AND USES THEREFOR

(57) **Abstract:** Nucleic acid and protein sequences relating to a cation channel which is sperm-specific (CatSper4) are disclosed. The CatSper4 protein is shown to be specifically expressed in sperm. Nucleic acids, vectors, transformed cells, transgenic animals, polypeptides, and antibodies relating to the CatSper4 gene and protein are disclosed. Also provided are methods of in vitro fertilization and contraception, methods of identifying modulators of CatSper4 activity, methods of genotyping subjects with respect to CatSper4, and methods of diagnosing and treating CatSper4-mediated disorders, including infertility. Related business methods are also disclosed.

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